

## THE STATE OF FLORIDA PERSPECTIVE ON IRRADIATION AS A QUARANTINE TREATMENT

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Research on the use of irradiation as a quarantine treatment accelerated following the announcement by EPA to withdraw EDB as a fumigant. In Florida, state, federal, and private groups combined forces to search for technologies to replace EDB. The lack of facilities to irradiate agricultural commodities prompted a private group in 1991 to open in Mulberry, Florida, the only Cobalt-60 facility in the US specifically designed for food products.

The Florida Department of Agriculture constructed a large linear accelerator facility to demonstrate the use of electrons and X-rays for irradiation of agricultural products. The facility was to be completed in 1991, however, design and installation problems with the linear accelerator began to occur.

Incorrect design of the electron focusing magnet resulted in a two-year delay in bringing the linear accelerator on line. When the CIRCE III accelerator was finally ready for acceptance testing in 1993 by General Electric Medical Systems-Europe (GEMS-E), it was determined that the machine was incapable of reaching full power (20KW). The reduced power level was in the range of 12-15 KW. In addition, there were numerous other problems with the operation of the linear accelerator that made machine reliability a real issue.

Basically, the State of Florida has been negotiating with GEMS-E since 1993 regarding final acceptance of the machine. Florida's final position is rejection of the linear accelerator due to it not meeting contract specifications. The machine is to be removed and a cash settlement paid to allow Florida to purchase a more reliable replacement irradiator.

One of the lessons learned from our experience is to be a cautious pioneer. This can apply to regulatory officials as well as commodity groups that are cautiously optimistic regarding the use of irradiation as a regulatory or food safety treatment. Irradiation is a safe, clean, and effective technology that is used to treat medical and industrial products, but supermarkets have been reluctant to put irradiated food products on the shelf. However, those that have, such as Carrot Top, have had positive response from customers. Food Technology reports that 40 retailers and 50 food service outlets now provide products they irradiate.

Many plant regulatory officials realize the potential value of irradiation as a phytosanitary treatment tool. However, implementation may be slow to develop, may be market (customer) driven, or forced by some cataclysmic event. Changes in regulations, as with methyl bromide, can greatly influence use of irradiation. At some time in the future, irradiation will find its niche as a tool to meet quarantine requirements.